



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2020-1006; Project Identifier 2019-CE-047-AD]

RIN 2120-AA64

Airworthiness Directives; Piper Aircraft, Inc. Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to supersede Airworthiness Directive (AD) 78-02-03, which applies to all Piper Aircraft, Inc. (Piper), Model PA-23-250 airplanes. AD 78-02-03 requires repetitively inspecting the stabilator tip tube and weight assemblies for cracks, inspecting for missing rivets and screws, replacing the forward rib/horn assemblies, and reinforcing the mounting. Since AD 78-02-03 was issued, Piper developed a newly-designed stabilator, which is not subject to the unsafe condition, and revised its service information. This proposed AD would retain the actions of AD 78-02-03, but would reduce the applicability and require the actions in the revised service information. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.

- Fax: (202) 493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Piper Aircraft, Inc., 2926 Piper Drive, Vero Beach, FL 32960; phone: (772) 299-2141; website: <https://www.piper.com/>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-1006; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: John Marshall, Aviation Safety Engineer, Atlanta ACO Branch, FAA, 1701 Columbia Avenue, College Park, GA 30337; phone: (404) 474-5524; fax: (404) 474-5605; email: john.r.marshall@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket Number FAA-2020-1006; Project Identifier 2019-CE-047-AD” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend the proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any

personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as "PROPIN." The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to John Marshall, Aviation Safety Engineer, Atlanta ACO Branch, FAA, 1701 Columbia Avenue, College Park, GA 30337. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The FAA issued AD 78-02-03 [Reg. Docket No. 77-EA-81, Amendment 39-3128] (43 FR 3079, January 23, 1978) (AD 78-02-03), for all Piper Model PA-23-250 airplanes. AD 78-02-03 was prompted by cracks found on the stabilator structure during routine inspections, including cracks in the tip balance weight, abnormal trim tab horn bushing wear, and skin and nose rib cracks. The FAA issued AD 78-02-03 to prevent weakening of the stabilator structure and loss of the trim tab and counter balance weight, which could result in reduced airplane control.

For all Model PA-23-250 airplanes, AD 78-02-03 requires repetitively inspecting both the stabilator tip tube and the weight assemblies for cracks, with follow-on alterations or replacements as necessary, in accordance with Piper Service Bulletin (SB) No. 540, dated January 4, 1977 (Piper SB 540). For different groups of serial-numbered airplanes, AD 78-02-03 requires a one-time inspection of the stabilator tip ribs for missing rivets and missing tube and weight assembly attachment screws with alteration as

necessary, replacement of the right and left stabilator tab forward inboard rib/horn assemblies, and/or reinforcement of the mounting of the stabilator tube and weight assemblies. The repetitive inspections in AD 78-02-03 for all serial-numbered airplanes have no terminating action and are required regardless of any corrective actions performed.

Actions Since AD 78-02-03 Was Issued

Since the FAA issued AD 78-02-03, Piper changed the design of the stabilator structure. Airplanes beginning with serial number 27-7954122 were manufactured with the stabilator design change and are not subject to the unsafe condition addressed by AD 78-02-03. The FAA determined the applicability of AD 78-02-03 should be revised to exclude those later-manufactured airplanes.

In addition, Piper revised SB 540, the service bulletin required by AD 78-02-03 for the repetitive inspections of the stabilator tip tube and the weight assemblies. Piper SB 540B, dated February 9, 2021 (Piper SB 540B), reduces the applicability of the affected serial numbers and contains separate instructions for inspecting and repairing airplanes with a modified tube and weight assembly or with a stabilizer balance weight replacement kit part number (P/N) 763 987.

Related Service Information under 1 CFR Part 51

The FAA reviewed the following service documents proposed for compliance with this NPRM:

- Piper SB No. 547, dated March 1, 1977, which contains instructions for inspecting the stabilator tip rib;
- Piper SB No. 569, dated August 24, 1977, which contains information for replacing the stabilator tab horn;
- Piper Service Letter No. 807A, dated September 8, 1977, which contains information for installing the stabilator outboard nose rib; and
- Piper SB No. 540B, February 9, 2021, which contains instructions for inspecting the stabilator tip tube and weight assembly and addressing any cracks found.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES.

Other Related Service Information

The FAA reviewed the following documents for information related to this NPRM:

- Piper SB 540, which contains instructions for inspecting and reinforcing the stabilator tip tube and weight assembly; and
- Piper Aztec Service Manual, Part Number 753-564, dated January 1, 2009. Paragraphs 4-65 through 4-67 of this manual contain procedures for checking control surface balance.

FAA's Determination

The FAA is issuing this NPRM after determining the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements in this NPRM

This proposed AD would retain all of the requirements of AD 78-02-03 but would reduce the applicability and update some of the service information that would be required for compliance.

Differences Between this Proposed AD and the Service Information

Piper SB 540B specifies contacting Piper for repair instructions. This proposed AD would require contacting the FAA for an approved repair method instead.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 625 airplanes of U.S. registry.

The FAA estimates the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
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Inspect the stabilator tip tube and weight assembly	0.5 work-hour X \$85 per hour = \$42.50	Not applicable	\$42.50 per inspection cycle	\$26,562.50 per inspection cycle
Inspect the stabilator tip ribs	0.5 work-hour X \$85 per hour = \$42.50	Not applicable	\$42.50	\$26,562.50
Replace the stabilator tab forward rib/horn assemblies	4 work-hours X \$85 per hour = \$340	\$817	\$1,157	\$723,125
Install additional nose ribs	1 work-hour X \$85 per hour = \$85	\$367	\$452	\$282,500

The FAA estimates the following costs to do any necessary repairs or replacements that would be required based on the results of the proposed inspection. The FAA has no way of determining the number of airplanes that might need these repairs or replacements:

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Repair stabilator tip tube and weight assemblies (airplanes without kit P/N 763 987)	4 work-hours X \$85 per hour = \$340	\$80	\$420
Install missing stabilator tip rib rivets and/or the stabilator tip tube and weight assembly attachment screws	1 work hour X \$85 per hour = \$85	\$39	\$124
Balance stabilator	5 work-hours X \$85 per hour = \$425	Not applicable	\$425

For airplanes with kit P/N 763 987, the cost to repair cracking may vary significantly from airplane to airplane, and therefore the FAA has no way of determining

an estimated cost.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA has determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Would not affect intrastate aviation in Alaska, and
- (3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by:

a. Removing Airworthiness Directive 78-02-03 [Reg. Docket No. 77-EA-81, Amendment 39-3128] (43 FR 3079, January 23, 1978); and

b. Adding the following new airworthiness directive:

Piper Aircraft, Inc.: Docket No. FAA-2020-1006; Project Identifier 2019-CE-047-AD.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 78-02-03 [Reg. Docket No. 77-EA-81, Amendment 39-3128] (43 FR 3079, January 23, 1978) (AD 78-02-03).

(c) Applicability

This AD applies to Piper Aircraft, Inc., Model PA-23-250 airplanes, serial numbers 27-7654001 through 27-7954121, certificated in any category.

(d) Subject

Joint Aircraft System Component (JASC) Code 5510, Horizontal Stabilizer Structure.

(e) Unsafe Condition

This AD was prompted by reports of cracks developing on the stabilator structure. The FAA is issuing this AD to prevent weakening of the stabilator structure and to detect and correct cracks on the stabilator tip tube and weight assembly. The unsafe condition, if not addressed, could cause weakening of the complete structure and lead to loss of the trim tab and counter balance weight, which may result in reduced airplane control.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Previously Required Actions Retained from AD 78-02-03

(1) Within 50 hours time-in-service (TIS) after January 26, 1978 (the effective date of AD 78-02-03), do the following inspections and modifications.

(i) For airplanes with serial numbers 27-7654001 through 27-7754054, inspect both stabilator tip ribs for missing rivets and missing tube and weight assembly attachment screws and if necessary alter in accordance with Piper Service Bulletin (SB) 547, dated March 1, 1977.

(ii) For airplanes with serial numbers 27-7654001 through 27-7754127, 27-7754130, 27-7754131, 27-7754133 through 27-7754136, and 27-7754138 through 27-7754144, replace the right and left stabilator tab forward inboard rib/horn assemblies by installing Piper Kit 761 143 or equivalent kit in accordance with Piper SB 569, dated August 24, 1977.

(iii) For airplanes with serial numbers 27-7654001 through 27-7754041 equipped with stabilators Piper part number (P/N) 15658-2, 15658-3, 15658-22 or 15658-23, reinforce the mounting of the stabilator tube and weight assemblies by installing additional nose-ribs with Piper Kit 761 141 or equivalent kit in accordance with Piper Service Letter 807A, dated September 8, 1977.

(2) Before further flight after completing the alterations in paragraphs (g)(1)(ii) and (iii) of this AD, balance the stabilator.

(h) Inspection of Stabilator Tip Tube and Weight Assembly

Within 10 hours TIS after the effective date of this AD or within 100 hours TIS after completing the last inspection required by paragraph (a) of AD 78-02-03, whichever occurs later, and thereafter at intervals not to exceed 100 hours TIS, inspect the left and right stabilator balance weight assemblies for cracks and complete any necessary repairs by following Parts I and II of the Instructions in Piper SB No. 540B, dated February 9, 2021, except you are not required to contact Piper for repair instructions. Instead, repair in accordance with FAA-approved procedures.

(i) Credit for Previous Actions

You may take credit for the initial inspection and corrective actions required by paragraph (h) of this AD if you performed those actions before the effective date of this AD using Piper SB No. 540, dated January 4, 1977, or SB No. 540A, dated October 20, 1980.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Atlanta ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in Related Information.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) For service information that contains steps that are labeled as Required for Compliance (RC), the following provisions apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

(k) Related Information

(1) For more information about this AD, contact John Marshall, Aviation Safety Engineer, Atlanta ACO Branch, FAA, 1701 Columbia Avenue., College Park, GA 30337; phone: (404) 474-5524; fax: (404) 474-5605; email: john.r.marshall@faa.gov.

(2) For service information identified in this AD, contact Piper Aircraft, Inc., 2926 Piper Drive, Vero Beach, FL 32960; phone: (772) 299-2141; website:

<https://www.piper.com/>. You may view this referenced service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

Issued on September 9, 2021.

Ross Landes, Deputy Director for Regulatory Operations,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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